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10/555279

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference AP101867	FOR FURTHER ACTION	See item 4 below
International application No. PCT/FI2004/000273	International filing date (<i>day/month/year</i>) 05 May 2004 (05.05.2004)	Priority date (<i>day/month/year</i>) 05 May 2003 (05.05.2003)
International Patent Classification (IPC) or national classification and IPC A01G 23/06		
Applicant HYKOMET OY		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).
2. This REPORT consists of a total of 6 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application
4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 740 14 35	Date of issuance of this report 11 November 2005 (11.11.2005)
	Authorized officer Beate Giffo-Schmitt Telephone No. +41 22 338 87 20

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

REC'D 02 SEP 2004

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:
Turun Patenttitoimisto OY
P.O. Box 99
FI-20521 Turku

Date of mailing
(day/month/year)

31 -08- 2004

Applicant's or agent's file reference

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/FI2004/000273

International filing date (day/month/year)

05-05-2004

Priority date (day/month/year)

05-05-2003

International Patent Classification (IPC) or both national classification and IPC

A01G23/06

Applicant

Hykomet OY et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further opinions, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/SE

Patent- och registreringsverket

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Form PCT/ISA/237 (cover sheet) (January 2004)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/FI2004/000273

Box No. I **Basis of this opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE
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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-20	YES
	Claims	NO
Inventive step (IS)	Claims	YES
	Claims 1-20	NO
Industrial applicability (IA)	Claims 1-20	YES
	Claims	NO

2. Citations and explanations:

Reference is made to the following documents:

D1: SU 397172 A,
D2: CA 2087323 A,
D3: SU 1311664 A,
D4: US 4141398 A,
D5: SE 452696 B.

The present invention relates to a stump grubber, a method for grubbing stumps and a method for the prevention of fungus disease.

The invention relates to the problem that grubbing stumps normally requires heavy machinery with high lifting power and often limited mobility in the forest. According to the invention the necessary power is reduced by providing a blade arranged to cut downwards to sever roots around the stump and gripping means comprising four or more spikes or blades arranged to penetrate the stump.

Document D1 which is considered being the closest prior art discloses a stump grubber with the features of the generalizing portion of claim 1 and 13 (refer to figure 2 and 3). The subject-matter of claims 1 and 13 differs from the stump grubber as disclosed in D1 in that the gripping means for gripping the stump comprises four or more spikes or blades arranged to penetrate the stump.

Starting from D1 the technical problem to be solved can therefore be regarded as how to provide an apparatus or a method for extracting stumps and the surrounding roots

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of: BOX V

efficiently with relatively low lifting power provided by e.g. a modern forest tractor.

A person skilled in the art faced with this problem would consider document D2 where a solution is disclosed.

According to D2, an apparatus (10) for use on a small backhoe is provided. The apparatus has a splitter element (14) with four radial blades (16) and four gripping members (refer to figure 2).

The person skilled in the art would, with background of document D2, modify the stump grubber of D1 and thus arrive at the subject-matter of claims 1 and 13. Since both documents relate to the same technical field the modification of the apparatus as disclosed in D1 according to the instructions given in D2 is a measure that can be expected from a skilled person.

The subject-matter of claims 1 and 13 is, thus, novel, but not considered to involve an inventive step.

In claims 2-12 and 14-19 a slight constructional change in the apparatus of claim 1 or the method of claim 13 is defined which comes within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen. Consequently, the subject-matter of claims 2-12 and 14-19 also lacks an inventive step.

It is well known in the art that the removal of stumps and roots from the ground can prevent fungus disease (e.g. see documents D3 and D4). The use of a known method for removing stumps and roots in order to prevent fungus disease is, therefore, not considered to involve an inventive step. Thus, the subject-matter of claim 20 is novel, but not considered to involve an inventive step.

Document D5 represents the general state of the art.

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**WRITTEN OPINION OF THE
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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
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In summary, the invention according to claims 1-20 is novel and has industrial applicability, but is not considered to involve an inventive step.